



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/519,124

12/21/2004

Riccardo Comper

15703US

7328

23676

7590

02/13/2008

SHELDON MAK ROSE & ANDERSON PC

100 East Corson Street

Third Floor

PASADENA, CA 91103-3842

EXAMINER

CHERRY, STEPHEN J

ART UNIT

PAPER NUMBER

2863

MAIL DATE

DELIVERY MODE

02/13/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/519,124	<b>Applicant(s)</b> COMPER, RICCARDO	
	<b>Examiner</b> Stephen J. Cherry	<b>Art Unit</b> 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-18 is/are allowed.
- 6) ☐ Claim(s) 1 and 4-14 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2-21-2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12-21-2004</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statement filed 12-21-2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein with regard to WO 01/40756 has not been considered.

### ***Drawings***

The drawings are objected to because functional blocks, such as 310 in figure 3 should include a label describing the function performed. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief

description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, and 4-14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,746,435 to Arbuckle.

With regard to claim 1, Arbuckle discloses a device for checking and managing the operating and diagnostic conditions of a mechanical seal in a machine, where the device automatically and continuously regulates a first pressure inside the mechanical seal depending on a second measured pressure in the machine in order to keep constant an optimum difference between the first pressure and the second pressure, the device comprising:

a) one or more than one pressure regulator operatively connected on one side to a pressurization line and on another side to a supply line for a fluid for the mechanical seal (435, fig. 4, ref. 58);

b) one or more than one transducer which detects a measured value of the first pressure in the mechanical seal ('435, fig. 4, 120 and 122);

c) one or more than one converter which drives the pressure regulator (435, fig. 4, ref. 126); and

d) one or more than one microprocessor, the microprocessor running a regulating algorithm for the converter, the pressure regulator and the one transducer ('435, fig. 4, ref. 126 and col. 9, line 25);

where the regulating algorithm enables the device to perform one or more than one of the following functions:

i) regulating the first pressure in the mechanical seal detected by the transducer and the second pressure in the machine by comparing the first pressure with a desired pressure setpoint value, the setpoint value being the sum of the second pressure and

an optimum set pressure difference recommended by a manufacturer of the mechanical seal;

ii) regulating a flow-rate of the mechanical seal ;

iii) checking the integrity of the mechanical seal based on detection and evaluation of actual pressure leakage ('435, col. 10, line 5);.

iv) checking for anomalies in the mechanical seal; v) counting operating hours of the mechanical seal; vi) displaying and recording data for the mechanical seal; and vii) interfacing with other apparatus or automated systems.

With regard to claim 4, and in view of the rejection of claim 1, Arbuckle discloses a device according to claim 1, where the transducer is adapted to measure the pressure in the pressurization line output from the device and the pressure inside the mechanical seal ('435, fig. 4, 120 and 122).

With regard to claim 5, and in view of the rejection of claim 1, Arbuckle discloses a device according to claim 1, where the regulating algorithm controls the pressure regulator ('435, col. 9, line 25).

With regard to claim 6, and in view of the rejection of claim 1, Arbuckle discloses a device according to claim 1, further comprising a minimum pressure switch for generating a low pressure alarm, the minimum pressure switch connected between the pressure regulator and the fluid supply line ('435, col. 9, line 40).

With regard to claim 7, and in view of the rejection of claim 1, Arbuckle discloses a device according to claim 1, further comprising means for counting the operating hours of the mechanical seal ('435, col. 12, line 29).

With regard to claim 8, and in view of the rejection of claim 7, Arbuckle discloses a device according to claim 7, where the means for counting the operating hours of the mechanical seal, perform the counting depending on the mechanical seal pressurization pressure and the pressure inside the machine ('435, col. 12, line 29).

With regard to claim 9, and in view of the rejection of claim 1, Arbuckle discloses a device according to claim 1, further comprising means for receiving an output signal allowing other apparata to monitor the operation of the device (435, col. 10, line 10).

With regard to claim 10, and in view of the rejection of claim 1, Arbuckle discloses a device according to claim 1, further comprising a display and a keyboard for changing operating parameters and for displaying past and present data, and comprises a mass storage for recording the data (435, col. 10, line 10, with display and keyboard inherent in database used for plant maintenance scheduling).

With regard to claim 11, and in view of the rejection of claim 10, Arbuckle discloses a device according to claim 10, where the mass storage is a solid-state mass storage (435, col. 10, line 10, database).

With regard to claim 12, Arbuckle discloses a device for regulating the pressure inside of a mechanical seal comprising means for regulating the pressure inside of the mechanical seal, where the means for regulating maintain an optimum pressure

difference between pressure inside the mechanical seal and pressure inside a machine in which the mechanical seal is installed ('435, col. 9, line 25).

With regard to claim 13, and in view of the rejection of claim 1, Arbuckle discloses a method of controlling and managing the operating and diagnostic conditions of a mechanical seal, the method comprising:

- a) providing a device according to claim 1 ('435, col. 9, line 25); b) connecting the device to the mechanical seal ('435, fig. 4); and
- c) activating the device, thereby controlling and managing the operating and diagnostic conditions of the mechanical seal ('435, col. 9, line 46).

With regard to claim 14, and in view of the rejection of claim 12, Arbuckle discloses a method of regulating the pressure inside of the mechanical seal, the method comprising: a) providing a device according to claim 12; b) connecting the device to the mechanical seal ('435, fig. 4); and c) activating the device, thereby regulating the pressure inside of the mechanical seal ('435, col. 9, line 46).

***Allowable Subject Matter***

Claims 15-18 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 15 recites, “f) a flowing need checking step; g) a flow-rate regulating step bypassed in case of negative check in the step f); h) an operating hours counting step; i) a data displaying and recording step; j) an interfacing step with other systems; and k) repeating steps b) through j)”. This feature, combined with additional claimed subject matter, overcomes the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 2 recites, “where the pressure regulator comprises a 2-way proportional valve”. This feature, combined with additional claimed subject matter, overcomes the prior art of record.

Claim 3 recites, “where the pressure regulator comprises a 3-way proportional valve”. This feature, combined with additional claimed subject matter, overcomes the prior art of record.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Cherry whose telephone number is (571) 272-2272. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SJC/  
2/8/2008

/John E Barlow Jr./  
Supervisory Patent Examiner,  
Art Unit 2863